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Subject: Re: Visualizing a 3D volume

Posted by [David Foster](#) on Tue, 20 May 1997 07:00:00 GMT

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Paal Berg wrote:

>  
> Visualizing a 3D volume  
>  
> I'm relatively new to IDL so I haven't the needed experience for this problem:  
> I want to visualize a 3D volume given by a (n x n x n)-matrix. The entries in  
> the matrix is either 1 or 0 and I want to plot the volume spanned by the ones. The polyshade  
and shade\_volume routines are not useful, because it is not an isosurface I have and  
shade\_volume doesn't give me a useful figure. I wonder if there exists some routines that will plot  
the surface of my volume or if there exists some other way of visualizing a 3D volume.

I would suggest starting with IDL's Slicer tool. It gives a "fair-to-poor" 3D rendering, at least of NMR images. At the least, it might provide a model for setting something up yourself. We converted a volume created from a series of NMR slices of the human brain into a 0's-and-1's map, and Slicer still gave a rendering similar to the original volume. Perhaps this would work for your data.

It's generally accepted, I believe, that IDL's 3D rendering capabilities are pretty limited.

Dave

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"I have this theory that if we're told we're bad,  
then that's the only idea we'll ever have.  
But maybe if we are surrounded in beauty,  
someday we will become what we see."   - Jewel Kilcher

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